TUNE-UP

924

ENGINE IDENTIFICATION

Engine identification number is located on the left side of the engine crankcase next to the clutch housing.

Application	Displacement	Code
924	1984 cc	VC
Turbo	1984 cc	3102

COMPRESSION PRESSURE

Test compression pressure with fully open throttle, oil temperature above 140° F (60° C), all spark plugs removed and engine at cranking speed. Each cylinder should be allowed about 12 compression strokes. Differences between cylinders should not exceed 43 psi (3 kg/cm²).

Application	Stand. Pressure psi (kg/cm²)	Min. Pressure psi (kg/cm²)
All Models	142-184 (10-13)	107 (7.5)

VALVE CLEARANCE

It is recommended that valve clearances be checked and adjusted with engine oil temperature at 176° F (80° C). To adjust, remove cylinder head cover and turn crankshaft until cam lobes of cylinder to be adjusted point upward.

NOTE — *On Turbo, remove pressure duct and top cover of air cleaner to remove cylinder head cover.*

Check valve clearance. Correct by making complete turns of adjusting screw, using US 8005 adjusting tool. See *Fig. 1*. One turn changes clearance by .002" (.05 mm). Various adjusting screws are available. Camshaft must be removed to replace screws.

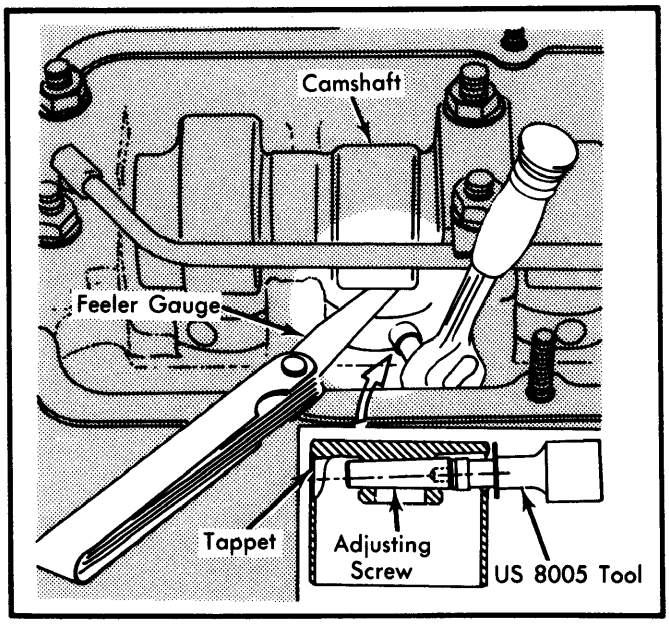

Fig. 1 Adjusting Valve Clearance

Valve Clearance Specifications

Application	Clearance
Intake	①.008" (.20 mm)
Exhaust	①.018" (.45 mm)

① — Adjust with engine at normal operating temperature.

VALVE ARRANGEMENT

I-E-I-E-I-E-I-E (front to rear).

SPARK PLUGS

Application	Gap In. (mm)	Torque Ft. Lbs. (mkg)
924	.028 (.7)	22 (3)
Turbo	.024 (.6)	22 (3)

Spark Plug Type

Application	Bosch	Champion
924	WR6DS	.....
Turbo	WR7DS	N8GY

HIGH TENSION WIRE RESISTANCE

Carefully remove high tension wires from spark plugs and distributor cap. Using an ohmmeter, check resistance of high tension wires while gently twisting wire. If resistance is not to specification, or fluctuates from infinity to any value, replace high tension wire(s).

Resistance (Ohms) Per Wire

Application	Ohms
All Models	6,000

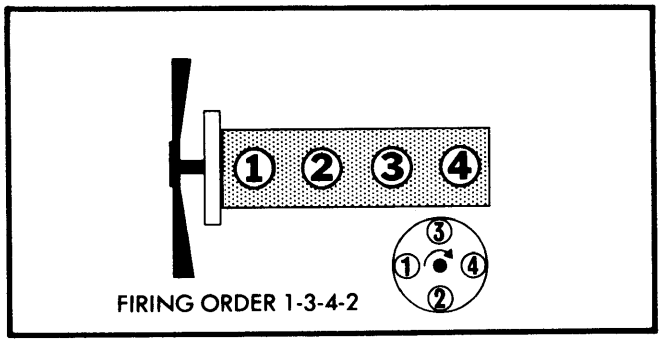

Fig. 2 Firing Order and Distributor Rotation

DISTRIBUTOR

All models are equipped with a breakerless, electronic ignition system.

Air Gap (Rotor-to-Stator)	.010" (.25 mm)

IGNITION TIMING

924 — Adjust timing with engine idling at specified RPM and both distributor vacuum hoses connected. Turn distributor until mark on flywheel aligns with reference edge on clutch housing.

TUNE-UP (Cont.)

Turbo – Adjust ignition timing with engine at normal operating temperature. Disconnect and plug both hoses at distributor and raise engine speed to 2000 RPM. Adjust timing by turning distributor until mark on flywheel aligns with reference edge on clutch housing.

Ignition Timing Specifications

Application	RPM	Timing
924	900-1000	TDC
Turbo	2000	20°BTDC

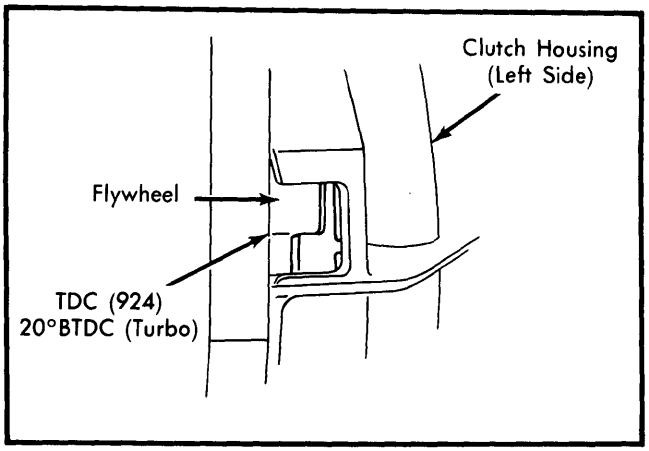

Fig. 3 Flywheel Ignition Timing Marks

IDLE SPEED & MIXTURE

1) Remove rubber cap from oxygen sensor plug (on frame rail) and disconnect plug. Connect exhaust probe to connection point on catalytic converter and calibrate CO tester. Connect a tachometer to engine.

2) With engine idling at normal operating temperature and engine fan off, turn control screw or bypass screw on throttle housing until correct idle speed is obtained.

3) If mixture must be adjusted, remove cap from top of mixture control unit and insert adjusting tool. Turning tool clockwise richens mixture; turning tool counterclockwise leans mixture. Always adjust from lean to rich.

NOTE – *Do not press down on tool while adjusting mixture. Be sure to remove tool and replace cap before accelerating engine or taking a CO reading.*

4) Accelerate engine briefly and allow to return to idle. Check CO level and adjust until correct. Recheck idle speed. Reconnect oxygen sensor plug and cap test port on catalytic converter.

Idle Speed & CO Level

Application	Idle RPM	CO%
924	950-1000	0.6-1.0
Turbo	850-950	0.5-1.0

FUEL PUMP PRESSURE & VOLUME

Two electric fuel pumps are used, one in fuel tank and one in right rear fender.

Pressure	65-75 psi (4.6-5.3 kg/cm²)
Volume	1 qt. in 40 sec.

EXHAUST EMISSION SYSTEMS

See EXHAUST EMISSION SYSTEMS section.

GENERAL SERVICING

IGNITION

DISTRIBUTOR

All models are equipped with Bosch breakerless, electronic ignition systems.

Other Data & Specifications – *See Tune-Up article and appropriate article in DISTRIBUTORS & IGNITION SYSTEMS section.*

IGNITION COIL

Coil Resistance (Ohms@68° F)

Application	Primary	Secondary
All Models	1.0-1.35	5500-8000

FUEL SYSTEMS

FUEL INJECTION

All models are equipped with Bosch Lambda CIS fuel injection with oxygen sensor.

Other Data & Specifications – *See Tune-Up and Bosch Lambda CIS Fuel Injection in FUEL SYSTEMS Section.*

ELECTRICAL

BATTERY

Application	Amp. Hr. Rating
All Models	63

Battery Location – Battery is located at right rear corner of engine compartment.

STARTER

Bosch ..... Overrunning Clutch

Starter Test Specifications

Application	Volts	Amps	Test RPM
All Models	11.5	30-50	5500-7500

GENERAL SERVICING (Cont.)

ALTERNATOR

Application	Rated Amp. Output
All Models	75

ALTERNATOR REGULATOR

All models are equipped with Bosch alternator regulators. With rear window defogger and headlights turned on, operating voltage should be 13.5-14.5 volts at 2000 RPM.

BELT ADJUSTMENT

Tension is correct when center portion of belt can be depressed approximately 3/16 to 3/8" (5-10 mm) by firm thumb pressure. Adjustment is made by shifting position of alternator. Remove small plate from alternator cover for access to adjustment lock screw.

FILTERS

Filter	Service Interval (Miles)
Oil Filter	
924	Replace every 15,000
Turbo	Replace every 7500
Air Filter	Replace every 30,000
Fuel Filter	Replace every 30,000

CAPACITIES

Application	Quantity
Crankcase (Includes Filter)	
924	5.3 qts.
Turbo	5.8 qts.
Cooling System (Includes Heater)	8.4 qts.
Manual Transaxle (SAE 90)	2.6 qts.
Auto. Transaxle (Dexron)	
Drain & Refill	3.0 qts.
Overhaul	6.4 qts.
Differential (SAE 90)	1.1 qts.
Fuel Tank	①16.4 gals.

① — Includes approximately 1.3 gals. reserve.